

Product datasheet

Recombinant human AMPK alpha1 + AMPK beta1 + AMPK gamma1 protein (Tagged) ab271362

[2 Images](#)

Description

Product name Recombinant human AMPK alpha1 + AMPK beta1 + AMPK gamma1 protein (Tagged)

Biological activity Specific Activity: ≥ 300 pmole/min/ μ g

Assay Conditions: Assay was done in Kinase buffer containing 1 mM DTT using AMARA peptide as a substrate (0.1 mg/ml), 20 μ M ATP and 100 μ M AMP . Reaction was done at 30°C for 45 min. Amount of ATP transferred was calculated using Kinase- Glo reagent.

Purity ≥ 90 % SDS-PAGE.
Affinity purified.

Expression system Baculovirus infected Sf9 cells

Accession [Q13131](#)
[Q9Y478](#)
[P54619](#)

Protein length Full length protein

Animal free No

Nature Recombinant

Amino Acid Sequence 1

Species Human

Sequence MRRLSSWRKMATAEKQKHDGRVKIGHYILGDTLGVGTFG
KVKVGKHELTG
HKVAVKILNRQKIRSLDVVGKIRREIQNLKLFRRHPHIKLYQVI
STPSDI
FMVMEYVSGGELFDYICKNGRLDEKESRRLFQQILSGVDY
CHRHMVVHRD
LKPENVLLDAHNAKIADFGLSNMMSDGEFLRTSCGSPN
YAAPEVISGRL
YAGPEVDIWSSGVILYALLCGTLPFDDDHVPTLFKKICDGIF
YTPQYLN
SVISLLKXMLQVDPMKRATIKDIREHEWFKQDLPKYLPED
PSYSSTMID
DEALKEVCEKFECSSEEEVLSCLYNRNHQDPLAVAYHLIID
NRRIMNEAKD

FYLATSPDPSFLDDHHLTRPHERVPFLVAETPRARHTLD
 ELNPQKSKHQ
 GVRKAKWHLGIRSQSRPNDIMAEVCRAIKQLDYEWKVVN
 PYYLRVRRKNP
 VTSTYSKMSLQLYQVDSRTYLLDFRSIDDEITEAKSGTATP
 QRSGSVSNY
 RSCQRSDSDAEAQGKSSEVSLTSSVTSLDSSPVDLTPRP
 GSHTIEFFEMC ANLIKILAQ

Molecular weight information 65 kDa by SDS-PAGE ~146 kDa (complex)

Amino acids 1 to 559

Tags His tag C-Terminus

Additional sequence information AMPK alpha1 protein

Amino Acid Sequence 2

Species Human

Sequence GNTSSERAALERHGGHKTPRRDSSGGTKDGRPKILMDS
 PEDADLFHSEE
 IKAPEKEEFLAWQHDLEVNDKAPAQARPTVFRWTGGGK
 EYLSGSFNWS
 KLPLTRSHNNFVAILDLPEGEHQYKFFVDGQWTHDPSEPI
 VTSQLGTVNN
 IIQVKKTDFEVDALMVDSQKCSDVSELSSSPGPYHQEP
 YVCKPEERFR
 APPILPPHLLQVILNKDTGISCDPALLPEPNHVMLNHLIALS
 IKDGMVL SATHRYKKKYVTLLYKPI

Molecular weight information 31 kDa by SDS-PAGE ~146 kDa (complex)

Amino acids 2 to 270

Tags His tag C-Terminus

Amino Acid Sequence 3

Species Human

Sequence METVISSDSSPAVENEHPQETPESNNSVYTSFMKSHRCY
 DLIPTSSKLVV
 FDTSLQVKKAFFALVTNGVRAAPLWDSKKQSFVGMILTID
 FINLHRYK
 SALVQIYELEEHKIETWREVYLQDSFKPLVCISPNASLFDA
 VSSLIRNKI
 HRLPVIDPESGNTLYLTHKRILKFLKLFITEFPKPEFMSKSL
 EELQIGT
 YANIAMVRTTTPVYVALGIFVQHRVSALPVVDEKGRVVDIY
 SKFDVINLA
 AEKTYNNLDVSVTKALQHRSHYFEGVLKCYLHETLETIINRL
 VEAHVHRL VVDENDVVKGVSLSDILQALVLTGGEKKP

Molecular weight information 38 kDa by SDS-PAGE ~146 kDa (complex)

Amino acids 1 to 331

Tags His tag C-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab271362** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications Functional Studies

SDS-PAGE

Form Liquid

Preparation and Storage

Stability and Storage Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle.

pH: 7.00

Preservative: 1.02% Imidazole

Constituents: 0.82% Sodium phosphate, 1.74% Sodium chloride, 0.004% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 25% Glycerol (glycerin, glycerine)

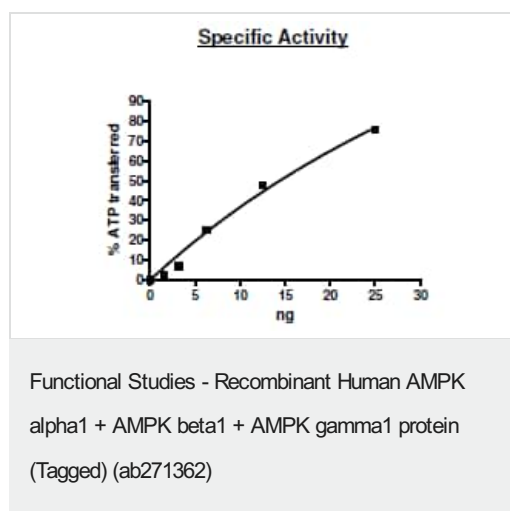
This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

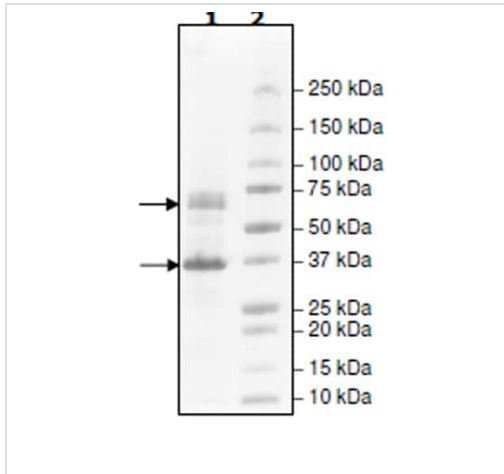
Relevance

AMPK (5'-prime-AMP-activated protein) is a heterotrimer of an alpha catalytic subunit, a beta and a gamma non-catalytic regulatory subunits. It belongs to the ser/thr protein kinase family. AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is also responsible for the regulation of fatty acid synthesis by phosphorylation of acetyl-CoA carboxylase. It regulates cholesterol synthesis via phosphorylation and inactivation of hydroxymethylglutaryl-CoA reductase and hormone-sensitive lipase.

Images



Specific activity of ab271362 was ≥ 300 pmole/min/ μ g.



SDS-PAGE analysis of ab271362.

SDS-PAGE - Recombinant Human AMPK alpha1 +
AMPK beta1 + AMPK gamma1 protein (Tagged)
(ab271362)

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